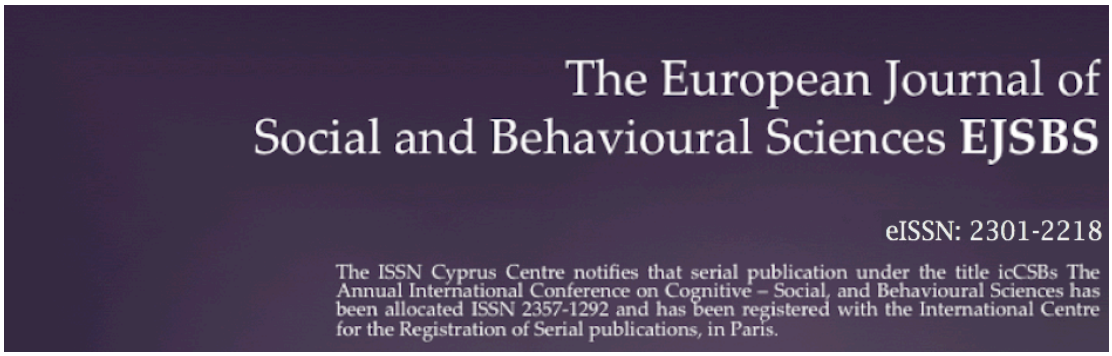

The European Journal of Social and Behavioural Sciences
EJSBS Volume XXI (eISSN: 2301-2218)

E-learning Environments, Opportunities and Challenges in Teaching and Learning to Play the Piano in Student Teacher Education

Jukka Enbuska[a]*, Atte Rimppi[a], Lenita Hietanen[a], Vesa Tuisku[a], Inkeri Ruokonen[b], Heikki Ruismäki[b]

[a]*Faculty of Education, University of Lapland, P.O Box 122, 96101, Rovaniemi, Finland*
[b]*Department of Teacher Education, University of Helsinki, P.O. Box 8, 00014, University of Helsinki, Finland*

http://dx.doi.org/10.15405/ejsbs.226

Abstract

Digitalization has become a part of Finnish education from elementary schools to universities. Additionally, students have begun to participate in university administration, thus participating in course development and design. Blended learning has arrived on the education scene, providing solutions on how to create e-learning environments and how to make them useful for students as well as teachers. The purpose of this research is to study the possibilities and challenges of e-learning environments in student teachers' piano courses. What is the position of e-learning environments compared to face-to-face or contact lessons? We want to know where students go to get information about piano playing and how students perceive autonomous learning, guided autonomous learning, and group contact lessons. The data was gathered from a large group lesson, from piano lessons in groups of different sizes, and from students' assignments where they reflected on the relationship between e-learning environments and contact lessons for the development of their piano playing and musicianship. The e-learning environments had good design and content; however, students pointed out that it is important to possess some musical skills in order to fully benefit from these environments. Students need to be instructed on the benefits of and how to use e-learning platforms and blended learning to enhance their knowledge and skills through independent learning.

∗ Corresponding author. Tel.: +0-000-000-0000 ; fax: +0-000-000-0000 .
E-mail address: jukka.enbuska@ulapland.fi

eISSN: 2301-2218
Selection & Peer-review under responsibility of the Editors

Keywords: Blended learning; E-Learning; Music Education; Higher Education

1. Introduction

Finnish universities are currently facing a situation whereby they need to reorganize their educational entities, cut staff, and cope with declining resources. In the faculty of education at the University of Lapland, the student teachers' music program is under pressure, now with fewer contact lessons for student teachers and more autonomous studying. This creates challenges for both teachers and students. It is important to sustain the quality of teaching and equip teachers with a set of skills which will allow them to teach music in elementary, junior high, and high schools. We suggest that blended learning offers the necessary support to Finnish university music programs that are currently facing such challenges.

The University of Lapland uses *Optima*, used in many universities nationwide, as one of its main e-learning environments for students. Teachers are able to add study material to *Optima* for autonomous learning purposes. In this vein, the corresponding author created folders in *Optima* for student teachers containing information and tasks related to music theory and videos of a piano being played in such a way that the student can see the piano keyboard, the passage presented in *Optima*, and the movements of the player's fingers. The videos consist of five levels of difficulty for each piano arrangement with the first level being the easiest and the fifth level being the most difficult.

The second e-learning environment of this study is an online music learning service called *Rockway*. The courses and lessons of *Rockway* have a pedagogical structure suitable for students and teachers (http://www.rockway.fi). Due to technical reasons, the students in this research were able to take advantage of the environments of *Optima* and *Rockway* only from the fourth lesson onwards.

2. Problem statement

This study, conducted in collaboration with the University of Helsinki, was aimed at interacting and developing music learning experiences together with students. We have incorporated our findings on blended learning (BL) to become an integral part of our teaching practices. For this study, the very question of whether or not contact lessons are necessary was mooted. We revamped teaching methods and course content in order to uncover the means to effectively incorporate BL into music education. By revealing new ways to use BL in music education, this study invites music teachers at other universities and schools to develop innovative methods to teach music, and stimulates discussion on how to foster communication between teachers and student teachers.

http://dx.doi.org/10.15405/ejsbs.226
eISSN: 2301-2218 / Corresponding Author: Jukka Enbuska
Selection & Peer-review under responsibility of the Editors

Previous studies on BL in higher education have concentrated on an evaluation of BL (Hubackoca and Semradova, 2016). However, in the field of music education, BL has been studied by only a small number of researchers. A few years ago, several music academies from Norway, Finland, and Sweden participated in a study, which focused on teacher visions in higher education music academies (Juntunen, 2014; Ferm-Thorgersen et al., 2016). The study brought to light how to develop music pedagogy in academies, and it revealed potential commonalities between traditional instrument pedagogy and classroom music pedagogy (Ferm-Thorgersen et al., 2016). We aim to develop music pedagogy as well, but with BL. In the future, it will be important to study the potential of BL, especially as the number of contact lessons declines.

It is not possible to define BL as simply a mix of *a* and *b*. It is possible to see a true blend here, a melting pot of different learning styles, environments, and relationships (Bonk and Graham, 2006, xvii-xiii). Our study lies in the overlap of two fields, music education and BL. Anderson (2003) and Dennen et al. (2007) accentuated teacher-student relations in creating e-learning tools and platforms where interaction between teacher and student was valued as the most important form of interaction by the students themselves (Anderson, 2003). Bernard (2012) drew attention to communication and the exchange of knowledge, both critical for the evolution of virtual learning environments. Small (2012) came to a similar conclusion; the better the results that teachers wish to receive from the e-learning space they have created, the more students need to be involved in the planning process. Ruokonen and Ruismäki (2016) studied student teachers' experiences in new BL environments, bringing up the very important point that there is no single right type of design for BL. Hietanen et al. (2016) examined the challenges and possibilities of BL in music education, and both contact and autonomous learning periods were found to be important elements in music education. Additionally, the possibilities of BL were taken into account in designing new courses (Hietanen et al., 2016). Our study carries on from this point, illuminating the problems that students and teachers may face in e-learning environments.

3. Research questions

1. What is the position of e-learning environments compared to contact lessons?
2. From where does a student seek information related to her/his piano playing?
3. Why does she/he seek information?
4. How are autonomous learning, guided autonomous learning, and group contact lessons perceived from a student's point of view?

By attempting to answer these questions, we have investigated the relationship between e-learning environments and contact lessons, which we hope will improve our teaching practices and web-based learning and studying.

4. Purpose of the study

The development of e-learning environments, especially in higher education, has generated considerable interest. New students bring enormous diversity in their skills each year, offering opportunities for different learning environments and encouraging us to study the possibilities and challenges of e-learning environments.

5. Research methods

The methodological approach in this qualitative study is action research. The functions of action research are both to produce new knowledge about learning processes and to develop teachers' practices in enabling those processes (Elliott, 1998; Stenhouse, 1980). The present study consisted of a group of experts (one professor in arts and skills education, one adjunct professor in music, one university lecturer in music didactics, one university lecturer in music education, and one lecturer in music technology) involved in developing learning in music education and learning environments in two Finnish universities (Manfra, 2009; Sagor, 2009). In addition, there was one research assistant participating in each phase of the investigation.

In the current study, action research is understood as a practice-based research strategy (Carr, 2006). Normally, there are spirals of cycles typical for action research (Carr & Kemmis, 1986), and in the current investigation, we were able to notice several types of cycles. One cycle consisted of the student teachers' various learning processes (cycle of students' personal learning experiences) throughout the entire program of music studies whereby the student teachers study consecutive courses taught by several educators. Another manifestation of a cycle was found in the discussions between the research assistant and the experts at the two universities; the discussions concerned continuous cycles of planning, reflections, and evaluations of the student teachers' progress during the academic year (cycle of educators' development of learning environments). Finally, various approaches to the same phenomena of music – for example music theory – in the consecutive courses taught by different educators (cycle of approaches to content) constituted a cycle as well (see McIntosh, 2010). The present study focuses on one part of the research project carried out between the University of Helsinki and the University of Lapland during the academic year 2015–2016. In all five investigations were carried out by the same authors, constituting the action research entity.

http://dx.doi.org/10.15405/ejsbs.226
eISSN: 2301-2218 / Corresponding Author: Jukka Enbuska
Selection & Peer-review under responsibility of the Editors

The research group consisted of 33 student teachers who are piano students of the corresponding author. One-third of this group had previously studied piano, and two-thirds of this group had no experience playing the piano before the study. Thirteen small groups of two to four students were formed. A total of 12 group lessons took place in these small groups during the academic year. The first data was gathered from a large group lesson where all 33 students responded to a survey which asked about previous experience studying music online. The second data was drawn from the small group lessons and group lessons with seven large groups which were formed by combining the smaller ones. The large group lessons took place twice at the end of the spring semester in a music technology MacBook class. The MacBook classroom has 12 MacBook Pros with keyboards connected. The first lesson took 60 minutes and the second lesson 120, and students studied autonomously without the teacher's presence during both lessons. The large group lessons were videoed with the permission of participating students. From the recorded lessons, we attempted to discover what kind of study processes students execute and where they search for information on how to play the given songs.

Educators in two Finnish universities took part in this study. The research assistant organized and analyzed the data; because he does not teach music courses, he was able to investigate data from an outside perspective without personal interests in teaching. Each participating student completed a form granting permission to collect and use any and all data from their lessons. All 92 students gave their permission, including the 33 students who participated this study.

In the beginning of the first large group lesson in the music technology MacBook class, the corresponding author informed the students that these two lessons were being recorded for research purposes. The many technical questions that students had regarding how to record and save songs were discussed in every group. While there could have been better instructions for technical issues such as recording songs, the lessons nonetheless were 60 minutes and 120 minutes, respectively, which gave students plenty of time to ask for help from each other, search information within *Optima*, or use search engines to obtain this information.

The third data was derived from student assignments. Piano students were encouraged to visit *Rockway* for instructional videos that would help their process of becoming better piano players. They had to write a contemplative analysis from at least one *Rockway* video based on the kind of thoughts the video raised. Additionally, students prepared an analysis from their playing skill and musicianship points of view on the *Optima* and *Rockway* content.

6. Findings

We used qualitative content analysis to analyze the data. From the research group of 33 students, 15% had explored e-learning environments moderately, and 24% had occasionally utilized e-learning platforms. In other words, 60% of students had never used any e-learning environments. Piano lessons were conducted parallel with *Rockway* studies by students. However, students faced challenges with *Rockway* lessons; students with no musical background did not understand the terms mentioned in videos. For the experienced piano players, the videos repeated already familiar concepts;

Tim said, "*Rockway* videos should be watched right from the first music lesson of the year if one doesn't possess any musical skills." Madeline and Amy confirmed Tim's observation: "One needs to have some musical skills in order to understand the language used in *Rockway* videos."

With regards to the skills that students studied in *Rockway*, modulation of common chords was popular. Students mentioned how the videos increased their understanding of common chord modulation. When the same topics were discussed during contact lessons, *Rockway* videos were found to be supportive (see Ruokonen et al., 2017). *Optima* videos were successful as well. They showed how the songs were played, which was particularly helpful at the beginning when students were getting familiarized with the piano. Students emphasized how e-learning environments allowed them to study in their own space at their own pace.

7. Conclusions and Implications

The relationship between contact lessons and e-learning environments can be seen as dialectic (Berger and Luckman, 1967). There are two sides to the equation: *Rockway* videos provide good support for contact lessons, and conversely, contact lessons provide the terminology necessary for students' knowledge base, consequently rendering the videos more comprehensible. Furthermore, students tended to use multiple e-learning platforms when searching for information regarding their piano playing (see Ruokonen and Ruismäki, 2016). At the core of e-learning development is how these environments change the basis of music study and subsequently allow contact lessons to concentrate on wider musical topics. The benefit of contact lessons is that positive interactions form between teachers and students (see Burbules, 1993; Freire, 2005). BL theories support this argument and add a third piece to the mix: electronic devices (Sharma and Barrett, 2007). This is where *Optima* and *Rockway* come in, triangulating the relationship between the student, teacher, and the device. The relationship between the student and the device is dependent on the teacher, meaning that the teacher plays a vital role as tutor and content creator (Dennen et al., 2007; Small et al., 2012). We allowed students to take part in content creation, thus, answering students' desires

for the kinds of content they wished to see in *Optima*. The relationship between teacher and student is thought to best form with interaction from the students (Andersson, 2003).

With this study, we provide an example of how to adapt BL to music education in universities. Our development method was student centered, offering a point of view on how to include students in the course and teaching development process. The study calls for a deeper discussion on the potential for BL and the possible challenges it presents.

Our goal is to provide piano students with opportunities for autonomous learning by increasing the level of song difficulty based on their technique, needs, and interests. Students can move back and forth between levels, thus, creating a game-like feeling when playing. Creating game-like scenarios in *Optima* with songs levels from 1 to 5 proved to be a working solution where students were able to reflect on the development of their musical skills. The purpose of the study was not to approach learning as linear; quite the contrary. In all music study, moving forward and backward is expected and relevant. This research revealed that we need to rethink the accessibility and provision of online study materials.

References

Anderson, T. (2003). Getting the mix right again: An updated and theoretical rationale for interaction. *The International Review of Research in Open and Distance Learning, 4*(2) from http://www.irrodl.org/index.php/irrodl/article/view/149/230.

Berger, P.L. & Luckman, T. (1967). *The social construction of reality: a treatise in the sociology of knowledge.* New York: Doubleday.

Bonk, C. J., Graham, C. R., Masie, E., Hofmann, J., Wagner, E. D., Lewis, N. J., Graham, C. R. (cop. 2006). *The handbook of blended learning: Global perspectives, local designs*. San Francisco (Calif.): Pfeiffer.

Burbules, N. C. (cop. 1993). *Dialogue in teaching: Theory and practice*. New York: Teachers College Press.

Carr, W. (2006), Philosophy, methodology and action research, *Journal of Philosophy of Education*, Vol. 40 No. 4, pp. 421-435.

Carr, W. & Kemmis, S. (1986), *Becoming Critical: Education, Knowledge and Action Research*, Falmer Press, London.

Dennen, V. P., Darabi, A. A., & Smith, L. J. (2007). Instructor-learner interaction in online courses: The relative perceived importance of particular instructor actions on performance and satisfaction. *Distance Education, 28*(1), 65-79.

Elliott, J. (1998). *The Curriculum Experiment. Meeting the challenge of social change.* Open University Press: Buckingham.

Ferm-Thorgersen, C., Johansen, G., & Juntunen, M. (2016). Music teacher educators' visions of music teacher preparation in Finland, Norway and Sweden. *International Journal of Music Education, 34*(1), 49-63. doi:10.1177/0255761415584300

Freire, P. (2005). *Sorrettujen pedagogiikka* (Original: Pedagogia do oprimido. Trans. In Finnish J. Kuortti). Tampere: Vastapaino.

Hietanen, L., Ruokonen, I., Ruismäki, H., & Enbuska, J. (2016). Student teachers' guided autonomous learning: Challenges and possibilities in music education. *Procedia - Social and Behavioral Sciences, 217*, 257-267. doi:http://dx.doi.org/10.1016/j.sbspro.2016.02.080

Hubackova, S., & Semradova, I. (2016). Evaluation of blended learning. *Procedia - Social and Behavioral Sciences, 217*, 551-557. doi:http://dx.doi.org/10.1016/j.sbspro.2016.02.044

Juntunen, M. (2014). Teacher educators' visions of pedagogical training within instrumental higher music education. A case in Finland. *British Journal of Music Education, 31*(2), 157-177. doi:http://dx.doi.org/10.1017/S0265051714000102

Manfra, M.M. (2009), Action research: exploring the theoretical divide between practical and critical approaches, *Journal of Curriculum and Instruction,* Vol. 3 No. 1, pp. 32-46.

McIntosh, P. (2010), *Action Research and Reflective Practice. Creative and Visual Methods to Facilitate Reflection and Learning.* London: Routledge.

Rahman, N. A. A., Hussein, N., & Aluwi, A. H. (2015). Satisfaction on blended learning in a public higher education institution: What factors matter? *Procedia - Social and Behavioral Sciences, 211*, 768-775. doi:http://dx.doi.org/10.1016/j.sbspro.2015.11.107

Ruokonen, I., & Ruismäki, H. (2016). E-learning in music: A case study of learning group composing in a blended learning environment. *Procedia - Social and Behavioral Sciences, 217*, 109-115. doi:http://dx.doi.org/10.1016/j.sbspro.2016.02.039

Ruokonen, I., Enbuska, J., Hietanen, L., Tuisku, V., Rimppi, A. & Ruismäki, H. (2017). Finnish student teachers' self-assessments of music study in a blended learning environment. *The Finnish Journal of Music Education*, Vol 20, No. 2, pp. 30-39.

Sagor, R. (2009), Collaborative action research and school improvement: we can't have one without the other. *Journal of Curriculum and Instruction,* Vol. 3, No. 1, pp. 7–14.

Sharma, P., & Barrett, B. (2007). *Blended learning: Using technology in and beyond the language classroom*. Oxford: Macmillan.

Small, F., Dowell, D., & Simmons, P. (2012). Teacher communication preferred over peer interaction: Student satisfaction with different tools in a virtual learning environment. *Journal of International Education in Business, 5*(2), 114-128.

Stenhouse, L. (1980). Reflections. In L. Stenhouse (Ed.), Curriculum Research and Development in Action. London: Heinemann Educational Books, 244-262.